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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,498	12/17/2003	Manabu Yamazoe	00862.023369.	6251
5514 7590 02/10/2009 FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112				
EXAMINER ABDI, AMARA				
ART UNIT 2624		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/736,498

Applicant(s)

YAMAZOE, MANABU

Examiner

Amara Abdi

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-9 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 17 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/01/2008 has been entered.
2. Applicant's amendments after Final office action, filed December 12, 2008 has been entered and made of record.
3. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 4 is rejected under 35 U.S.C. 102(b) as being anticipated by Shu (US 5,517,335).

Shu discloses a lookup table for obtaining an output value defined for an input value (col. 6, lines 12-13), comprising:

a main lookup table (LUT1) adapted to, when a definition of an output value has or is regarded to have symmetry (col. 7, lines 45-51) for a plurality of input values (col. 8, lines 36), (it is read that the plurality of pixels have a plurality of input values).

A sub-lookup table (LUT2) (col. 6, lines 43-46) to store an address of an entry (col. 7, lines 65-67) in which a first input value (R) and a second input value (B) of the plurality of input values (R,G, B) are the same (col. 6, lines 16-25);

wherein the address (average value) of said main lookup table is determined on the basis of an address obtained from said sub-lookup table (average value stored in LUT2) (col. 7, lines 66-67) by the first input value (R) being equal or less than the second input value (B) of two arbitrary input values (col. 6, lines 16-25) and a difference between the first and second input values, in correspondence with the two arbitrary input values (difference between the primary color values) (col. 8, lines 51-58).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2, 5, and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shu (US 5,517,335) in view of Lee et al. (US 5,867,286).

(1) Regarding claims 1 and 7:

Shu teaches the creating of a main lookup table (LUT 1) which stores saturation values (discrete values or average saturation) (col. 7, lines 53-57) for color values (R, G, B) (col. 6, lines 16-21), and a sub-lookup table (LUT 2) for obtaining a value (average value) corresponding to the first color value (R) (col. 6, lines 41-42) for accessing the main lookup table (LUT 1) (retrieving the stored values) (col. 7, lines 56-57), wherein the first color value is equal to or less than the second color value (col. 6, lines 16-25);

determining an address (average value) of the main look up table in correspondence with the first and second values (col. 7, lines 56-57) on the basis of the value obtained from the sub-lookup table (average value stored in LUT2) (col. 7, lines 66-67) and a difference between the first and second color values (difference between the primary color values) (col. 8, lines 51-58);

obtaining a saturation value (discrete value or average saturation) corresponding to the first and second color values (primary color values) (col. 7, lines 54-56) by accessing the main lookup table using the address (average value) determined in said determining step (col. 7, lines 56-57).

However, Shu does not teach explicitly the difference color value.

Lee et al., in analogous environment, teach a color processing method and apparatus, where using color difference signals (R-Y and B-Y) and two lookup tables (LUT1 and LUT 2) (col. 2, lines 38-56).

It is desirable to correct color signal distortion in view of visual-sensitivity. The Lee's approach, where using color difference signals (R-Y and B-Y) and two lookup

tables is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Lee et al. teaching to substitute Shu's teaching of primary colors (R, G, B) with color difference signals (R-Y and B-Y), to determine the address (average value) in correspondence with the difference between the color difference signals, because such combination corrects color signal distortion in view of visual-sensitivity (col. 2, lines 20-25).

(2) Regarding claims 2 and 8:

The combination Shu and Lee et al. teach the parental claim 1. Furthermore, Shu teaches the method and an apparatus (col. 1, line 44), where the main lookup table has a smaller number of entries than the number of all possible combinations of the two color difference values by utilizing symmetry of the saturation value for the color difference values (col. 7, lines 45-51), (it is read that by the use of curve, the lookup table will have a smaller number of entries than the number of all possible combinations of the two color difference values, since the curve is symmetric and representing the saturation value and approaching zero in either extreme).

(3) Regarding claim 5:

Shu teaches the parental claim 4. However, Shu does not teach explicitly the color space.

Lee et al., in analogous environment, teach a color processing method and apparatus, wherein using a color space (Figs. 3A and 3B, col. 4, lines 62-67).

It is desirable to correct color signal distortion in view of visual-sensitivity. The Lee's approach, where using a color space is to achieve this goal. Therefore, it would

have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Lee et al. teaching, where using color space, with the Shu teaching, because such combination corrects color signal distortion in view of visual-sensitivity (col. 2, lines 20-25).

8. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shu and Lee et al., as applied to claims 1 and 7 above, and further in view of Kaye et al. (US 5,089,882).

The combination Shu and Lee et al. teaches the parental claim 1. However, the combination Shu and Lee et al. do not teach explicitly the storing of an address in lookup table of the entry in which the two color difference values are the same.

kaye et al., in analogous environment, teaches a processing for color video signals, where storing the address in lookup table of the entry (col. 10, lines 34-37) in which the tow color difference values are the same (col. 5, lines 57-59), (the addressing by unique pairs of values corresponding to the incoming R-Y and B-Y is read as the same concept as the tow color difference values are the same).

It is desirable to maintain the composite signal within the pre-defined limits while still insuring that any processing of the color video signals is carried through with a minimum of change to the luminance, hue of saturation of the resulting composite signal. The Kaye's approach, where storing the address in lookup table of the entry in which the tow color difference values are the same is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the

invention, to apply the Kaye et al. teaching, where storing the address in lookup table of the entry in which the tow color difference values are the same, with the combination Shu and Lee et al., because such feature maintains the composite signal within the pre-defined limits while still insuring that any processing of the color video signals is carried through with a minimum of change to the luminance, hue of saturation of the resulting composite signal (col. 1, lines 54-62).

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shu (US 5,517,335) in view of Suzuki (US 6,650,336).

Shu teaches the parental claim 4. However, Shu does not teach explicitly where the output value includes saturation in a color space determined in advance.

Suzuki, in analogous environment, teaches a color conversion device and a method capable of improving color reproduction, where the output value includes saturation in color space, which is determined based on three-dimensional lookup table (col. 3, lines 34-40).

It is desirable to improve the color reproduction. The Suzuki's approach, where the output value includes saturation in color space, which is determined, based on three-dimensional lookup table is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Suzuki's teaching, where the output value includes saturation in color space, which is determined, based on three-dimensional lookup table, with the Shu teaching, because such combination improves the color reproduction (col. 3, lines 50-53).

Contact Information:

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amara Abdi whose telephone number is (571)270-1670. The examiner can normally be reached on Monday through Friday 8:00 Am to 4:00 PM E.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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